MINUTES OF THE DIOXIN REASSESSMENT REVIEW SUBCOMMITTEE TELECONFERENCE

JANUARY 23, 2001

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The DRRS met in Public Teleconference on January 23, 2001 at 2pm EST. The meeting was announced in the Federal Register at FR Vol. XX, Number XXX, January XX, 2001, pp. xxx-xxx (Attachment A). The proceedings followed the agenda (Attachment B) with minor deviations. The purpose of the meeting was to address, and if possible resolve, outstanding issues in the Committee's report.

Members and Consultants participating were: Drs. Lippmann (Chair), Albert, Brown, Clapp, Crump, Graham (late signing on), Kim, Liu, Matanoski, McConnell (late signing on), McKone, Morandi, Paustenbach, Perdew, Ringen, Thomas, Weiss.

EPA Staff participating: Drs. Farland and Rordan; Mr. Moore.

SAB Staff participating: Drs. Barnes and Fowle; Mr. Flaak, Mr. Rondberg (DFO), Ms. Fields.

In addition, some 25-30 members of the public joined the conference; 17 were present in a conference room in EPA Headquarters, and the remainder called in via telephone from various locations. Sign-in sheets are incorporated as Attachment C.

The teleconference opened at 2pm. After calling the roll of the Committee and of the members of the public online, the DFO asked Dr. Ringen to introduce himself and describe his affiliations and research interests, since he was not able to attend the November 1-2, 2000 meeting of the Committee at which the other participants introduced themselves. The DFO also announced that the meeting was being taped by a member of the public on line with the meeting.

The Chair then made a brief opening statement, noting that the Committee had made a good start towards a generating a consensus report, but that it was important to resolve the several major issues still outstanding.

After deciding to add one issue to the agenda, that of Hormesis/Anti-hormesis activity of dioxin (see item m) below), the Committee proceed to address the issues identified by the agenda.

a) Elements of the Executive Summary and consistency with the main text

1) Some Members initially suggested dropping the discussion of hormesis, but, after discussion, the Committee felt the need to address it without making a judgment on its existence. Dr. Weiss' suggestion to change the heading of the paragraph to "Non-monotonic Dose Response" was accepted. Dr. Crump will re-word the paragraph with focus on response to low level exposures, avoiding the use of the word "hormesis," but not the underlying concept. He will also

propose any needed changes to the report body text to make it consistent with the revised paragraph.

2) Dr. Albert suggested that the final statement of paragraph d) (a recommendation that the Agency not provide a quantitative risk estimate for cancer but rather develop the same type of MOE analysis for cancer as it has for non-cancer) leaves too much burden on risk managers. The discussion devolved to a discussion of the Committee position on the use of the MOE, the RfD/RfC, or some combination. Dr. Crump suggested the use of the Rfd/RfC as superior to the MOE, because the MOE lacks some information that RfD provides, and advocated the RfD/RfC approach for both cancer/non-cancer assessment. Dr Albert agreed, as long as dioxin is couched as non-genotoxic; the rest of the Committee concurred with this position. There was further discussion about linearity and possible threshold considerations, but the Committee position did not change. Dr. Crump was tasked with re-drafting the paragraph.

3) Dr. Weiss felt that discussion in paragraph a) of the Executive Summary on the mechanisms of carcinogenicity and labeling of dioxins as carcinogen was lacking. Drs. Albert and Thomas both felt that the latter portion of the paragraph was convoluted and needed to be revised. Dr. Thomas was requested to rewrite the section.

4) Dr. Weiss didn't think that the statement "A majority.." in the opening of paragraph b) was correct. Drs. Thomas and Clapp both agreed. Dr. Thomas was tasked with re-writing the paragraph.

5) Dr. Weiss felt that the wording in paragraph j) suggested that a diet rich in vegetables constituted a risk of high exposure to naturally occurring sources of dioxins. The Committee agreed, and decided to delete a parenthetical phrase " (perhaps as much as 1,000,000-fold).

6) Dr. Thomas felt that paragraph e) (Non-cancer Risks at Background Doses) was somewhat redundant to paragraph d) (Cancer Risks at Background Doses), but the Committee did not agree. There was agreement that the paragraph did require revision, however. Dr. Crump suggested that it should address upper-bound risk estimates, and needed further mention of food supply safety. The DFO will check with EPA staff on references to the safety of the food supply in the draft Reassessment document. Dr. Weiss was tasked to re-write the paragraph, and to check against the report body text for consistency.

b) Sections on TEF/TEQ, and their internal consistency: this item was deferred, since Dr. Weiss has just completed a revision of the relevant report sections. His revision will be forwarded to the Committee for their comments.

c) Use of MOE and/or RfD/RfC: this item was dropped, since it had been covered in the discussions cited above

d) Use of Hill Model vs. power model: Dr. Crump pointed out that the ED_{01} methodology used by the Agency is not one of the methods recommended in some current and draft risk assessment guidelines. He also presented results from some limited sample data sets using a different ED_{01} approach that produced quite different ED_{01}. He will revise the text to include his sample calculations, with suitable caveats as to the limitations of his data sets.

e) Issue re uncertainty and conservatism for risk management at end of section 3.2.1: this item was dropped, since it had been covered in the discussions cited above

f) Retention/deletion of detailed paragraph on Ah receptor activity in section 3..3.1: Some Members felt that the detailed exposition on Ah receptor mechanisms was too detailed and too obscure for most readers, and did not relate to the Committee's report *per se*. After discussing the issue, the Committee decided to retain the discussion, but tasked Dr. Perdew with expanding the discussion to make it more understandable to the lay reader, and make its relevance to the report more obvious.

g) Retention/deletion of paragraph re data from GE in section 3.4.2: Several Members questioned the propriety of referencing data which the Committee has not reviewed, and which originated from a "stakeholder" with a possible financial interest in the outcome of the reassessment. Some Members felt the data had been peer-reviewed, and that it was important that EPA be advised to study the data. It was decided that the paragraph would be retained (without attribution to GE) if the data had been published in an appropriate journal.

h) Dr. Morandi raised a question about the effect of possible exposure to confounding neurotoxic herbicides on NIOSH cohort (section 3.5.1: Dr. Matanoski felt that the age/duration of exposure was more important than the possible confounders. Dr. Weiss will revise the relevant discussion, with input from Dr. Morandi.

i) Retention/deletion of para in 3.6.1 relating to "pooled analysis" in Ranch Hand/Sevaso data as challenged by Clapp: Dr. Clapp feels that EPA has adequately supported the pooling. Action was deferred pending revision of the text in response to the comments

on epidemiological issues by Dr Matanoski.

j) Graham and Thomas proposals for re-write of "reverse extrapolation" discussion in section 3.6.1: not addressed due to lack of time

k) Handling of diverse views in section 3.6.3 re cancer: Closure was not reached on this item due to lack of time. During the brief discussion which did take place, Dr. Matanoski noted that she finds the handling of the epidemiological findings is the biggest problem in dealing with issue of dioxin and cancer. She also suggested that EPA needed to address better how dioxin functions as a cancer promoter. The Committee agreed with her ideas, but, because the discussion was not completed, no assignments concerning rewriting were made.

l) Recommendation that EPA apply a common risk assessment paradigm (MOE?) to both cancer and non-cancer: this item was dropped, since it had been covered in the discussions cited above

m) Hormesis/anti-hormesis: this item was dropped, since it had been covered in the discussions cited above

Dr. Lippmann closed the meeting by thanking the Committee, and noting that we still needed to review the various comments in the cancer-related discussions in order to come to some consensus on that issue. He also stated that it was now improbable that a creditable draft could be produced in time for review by the SAB Executive Committee (EC) at its February 5 meeting, and that an alternative approach to EC review would have to be found.

The DFO will circulate Dr. Matanoski's latest comments (primarily on epidemiological issues) to the Committee, and initiate arrangements for a non-FACA Committee working teleconference to help finalize the report. Notice of the meeting will be posted on the SAB website for the benefit of the interested public.

The Chair adjourned the meeting at 4:21pm, EST.

I certify that these minutes are accurate to the best of my knowledge.

Dr. Morton Lippmann

Chair

Mr. Samuel Rondberg
Designated Federal Officer